

### Section 50 Prestressing Concrete

#### 4-5001 General

A large percentage of the bridges built in California are prestressed, post-tensioned type structures. Section 50, “Prestressing Concrete,” of the *Standard Specifications* discusses prestressing precast or cast-in-place concrete by tensioning prestressing steel. For more detailed information, see the Office of Structure Construction’s (OSC) *Prestress Manual* and Section 160, “Prestressed Concrete,” of the *Bridge Construction Records and Procedures Manual*.

<http://www.dot.ca.gov/hq/esc/construction/manuals/OSCCompleteManuals>

#### 4-5002 Before Work Begins

To comply with Section 5-1.23, “Submittals,” of the *Standard Specifications* [Section 5-1.02, “Plans and Working Drawings”] the contractor must submit for approval working drawings of the proposed prestressing system. The drawings go directly to the Office of Structure Design documents unit, as specified in Section 50, “Prestressing Concrete,” of the *Standard Specifications*. The Office of Structure Design and the OSC coordinate the review of the working drawings. The Office of Structure Design has the primary responsibility for approving the working drawings.

Before work begins:

- Verify the receipt and proper distribution of form CEM-3101, “Notice of Materials to Be Used,” which lists prestressing materials.
- Review the OSC *Prestress Manual* for instructions on prestressing records to keep during prestressing operations.
- Before the contractor’s operations begin, review both sources of information in a tailgate safety meeting.

#### 4-5003 During the Course of Work

Prestressing operations are dangerous. The OSC *Prestressing Manual* contains safety information for prestressing operations. The OSC Code of Safe Practices, found on the OSC website, contains safety guidelines for prestressing operations.

After completing the work for each structure, the contractor must submit corrected working drawings to you for transmittal to the Office of Structure Design documents unit. Remind the contractor that final contract acceptance will not happen until it has submitted the corrected working drawings.

#### 4-5004 Measurement and Payment

The contract price for furnishing precast members includes payment for prestressing precast concrete members. Prestressing cast-in-place concrete is paid for on the basis of a lump sum price. For guidelines for making monthly progress payments for prestressing cast-in-place concrete, see the Bridge Construction Memo 6-4.0, “Partial Payments,” of the *Bridge Construction Records and Procedures Manual*.